



# Sustainability Report

**2025**

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University of Essex

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# Sustainability Report 2025

## Vice Chancellor's Foreword



*It is my pleasure to provide the foreword for our 2025 Sustainability Report, a reflection of our ongoing commitment to sustainable action through education, research and responsible operations. This report highlights the progress made, through the contribution of many teams. The work that is being undertaken to reduce our environmental impact is flourishing, following several years laying the foundations. I know that to reach this point, many colleagues have contributed to deliver meaningful results.*

*Having just begun my time at Essex, it is encouraging to see just how well-established sustainable action is, and the variety of achievements. Our energy consumption per square metre of building floor space has dropped 30%, plus 8% of our electricity is generated on-site through solar panels. Energy efficiency and water saving projects, as well as changes to student and staff habits have all contributed. Our wider impacts are improving too: 34% of our waste being recycled; habitat areas for biodiversity up 5.5% since 2023; and vegetarian and plant-based options representing 30% of Essex Food menus.*

*Students and staff are playing their part as environmental champions too; hundreds have completed training and inductions on our approach to sustainability and carbon literacy. 32 teams participated in the Sustainable Essex Awards in 2024-25, and the Sustainable Students Group have been running their own events, from a COP Climate Café to a sustainable fashion show.*

*Essex's recognition in UK and global rankings affirm that we are embodying sustainability and leading by example. In a challenging time for the UK HE sector, we can be proud that we are upholding our commitment to sustainability, in the context of a climate and ecological emergency.*

*Sustainability is not a destination, but a journey; one that demands continual learning, transparency, and bold ambition. I invite you to explore this report and join us as we continue to strive to be an environmentally and socially responsible university.*

*Professor Frances Bowen*

*Vice-Chancellor*

# Introduction

At the University of Essex we are working hard to be environmentally sustainable wherever we can. Sustainability matters to our community and achieving our goals is a collective challenge.

We have:

- Declared a climate and ecological emergency
- Committed to reaching net zero scope 1 and 2 carbon emissions by 2035
- Developed a cross-university Sustainably Sub-Strategy

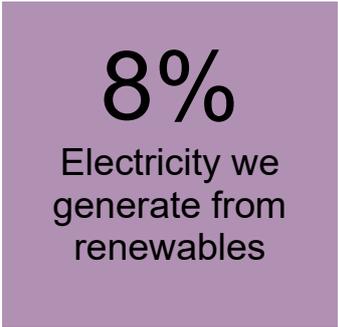
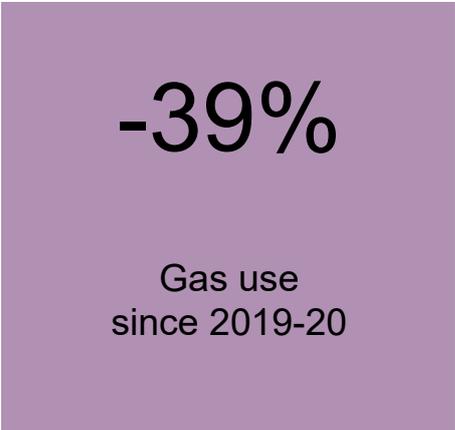
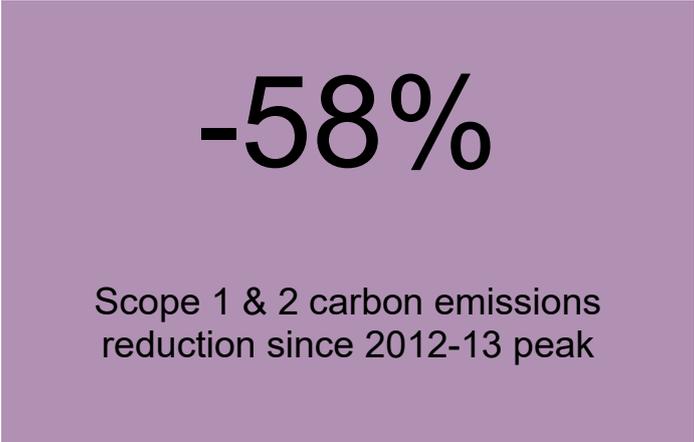
Our Sustainability Sub-Strategy 2021-28 is far reaching and challenges us across 39 KPIs and 203 actions. This report provides an update on progress in 2023-24 and 2024-25.

The Sustainability Sub-Strategy sets out our ambitions against [13 priority areas](#):

SSS Priority areas	
Priority 1 - Scope 1 and 2 carbon emissions	Priority 8 - Travel and transport
Priority 2 - Scope 3 carbon emissions	Priority 9 - Food and drink
Priority 3 - Education	Priority 10 - Sustainable buildings
Priority 4 - Research	Priority 11 - Space use
Priority 5 - Biodiversity and grounds	Priority 12 - Finance and procurement
Priority 6 - Water management	Priority 13 - Our community
Priority 7 - Waste and recycling	

The University of Essex mission is to deliver excellence in education and excellence in research, and doing this in sustainable ways creates opportunities for innovation and leadership. All members of our community have a role to play in ensuring that we are an environmentally responsible and sustainable university for the long term. This report presents the breadth and depth of work being done.

# Progress highlights



# Priority 1: SCOPE 1 AND 2 CARBON EMISSIONS

**58.3%** Amount we've reduced our carbon emissions from a 2012-13 peak of 18,851 tCO<sub>2</sub>e

Our annual carbon emissions have been declining steadily over the past decade, contributed to through a range of energy efficiency projects, including building management system (BMS) optimisation; installation of energy efficient equipment including boilers, lighting and ventilation systems; and engagement initiatives, as well as decarbonisation of the national electricity grid. Our scope 1 and 2 carbon emissions have reduced by 488 tCO<sub>2</sub>e (6%) from 2023-24 to 2024-25.

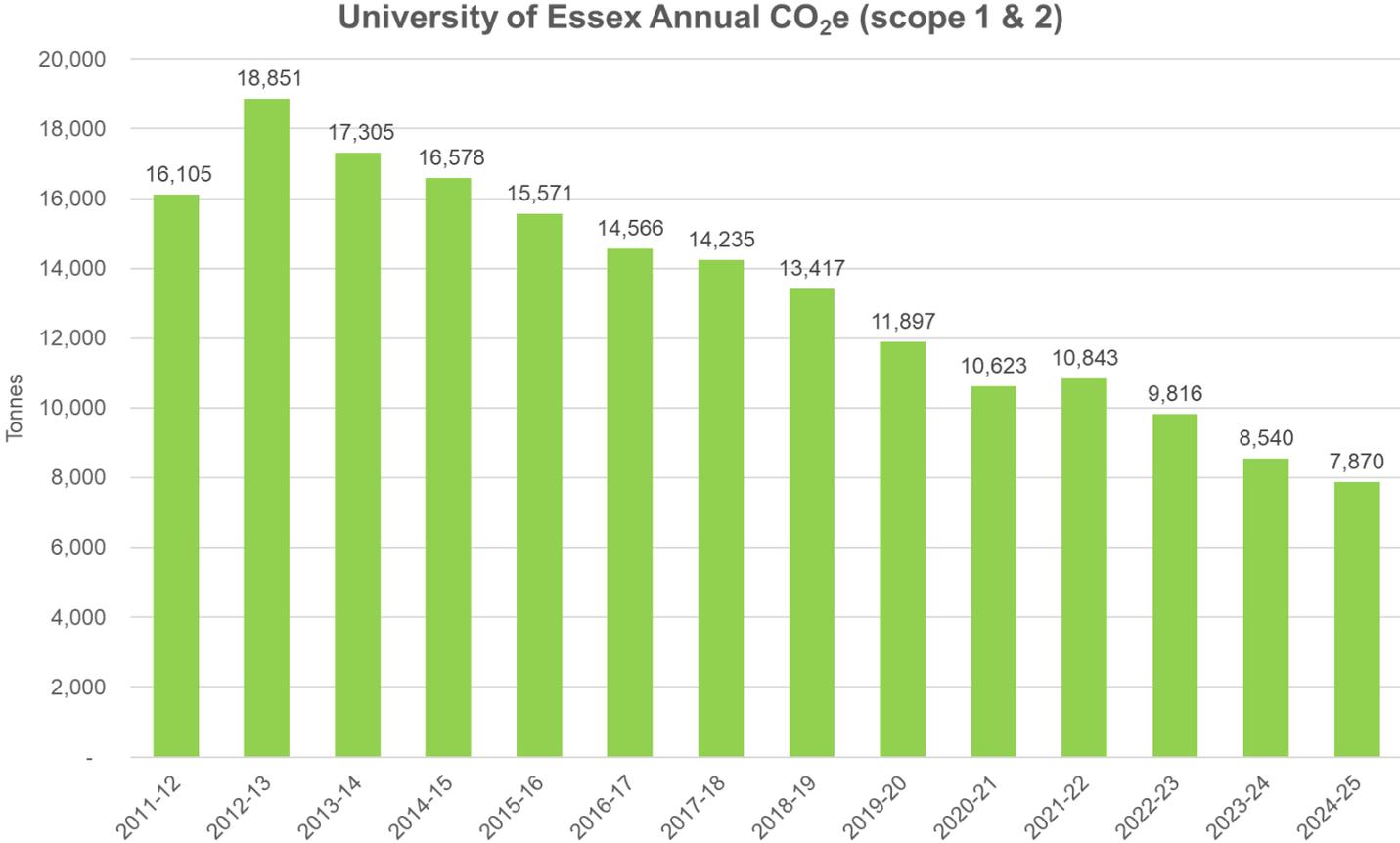


Figure 1. Annual carbon emissions at the University of Essex, 2011-12 to 2024-25

We continue to develop a better understanding of our overall energy use, and the associated carbon emissions of our buildings. [In 2024 Mitie undertook a full audit of our buildings' energy use and efficiency.](#) Their detailed report on priority areas will help us optimise, economise and decarbonise on our journey towards net zero carbon emissions by 2035. The report will allow us to identify the most cost-effective and high priority actions.

## SOUTH COURTS SOLAR PANEL INSTALLATION

We have set ourselves a target to generate 25% of our own electricity from renewable sources by 2028. In 2023-24 over 1,500 solar photovoltaic (PV) panels have been installed at our South Courts accommodation, taking us to around 8% on-site generation (up from 4%), reducing annual CO<sub>2</sub>e by approximately 100 tonnes of CO<sub>2</sub>e annually. In total we have over 5,000 solar panels.

# Priority 2: SCOPE 3 CARBON EMISSIONS

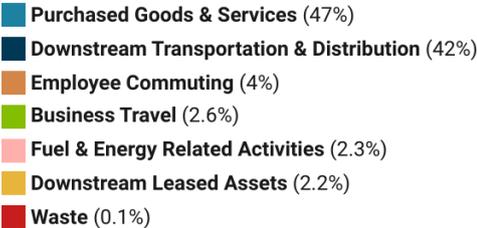
**2050** Our target date to reach net zero scope 3 carbon emissions

We follow the [Greenhouse Gas Protocol's Corporate Value Chain Standard](#) (GHG Protocol) when calculating our annual scope 3 carbon emissions, across as many relevant upstream and downstream categories as possible. The GHG Protocol's categories include:

- Purchased goods and services
- Capital goods *(not yet calculated due to nascent methodology and data availability)*
- Fuel and energy related activities
- Upstream and downstream transportation and distribution *(not yet calculated due to nascent methodology and data availability)*
- Waste generated in operations
- Business travel
- Employee commuting
- Downstream transportation and distribution (including student arrivals and student commuting)
- Downstream leased assets
- Investments *(not yet calculated due to nascent methodology and data availability)*

To date we have calculated scope 3 emissions for 2021-22, 2022-23 and 2023-24, with the methodology improving each time, and the data available increasing.

## CO<sub>2</sub> Emissions by Scope 3 (2023–24)



Created with Datawrapper

Figure 2. Proportional breakdown of scope 3 category for 2023-24.

For 2022-23, the University's scope 3 total is estimated to be circa 81,000 tCO<sub>2e</sub>, and for 2023-24 circa 91,000 tCO<sub>2e</sub>, based on available data. Around one third of this comes from purchased goods and services; under current methodology this is calculated based on spend and is predominantly influenced by increases or decreases in expenditure.

A separate, standalone, carbon report has been produced, which breaks down all three scopes in detail, covering previous years, [which can be found on our website](#).

### **GETTING TO ESSEX – STUDENT TRAVEL EMISSIONS**

With students from around the world studying at our campuses the associated travel emissions are substantial. For 2023-24, we estimate that international student arrivals were circa 29,800 tCO<sub>2e</sub> (assuming one inbound and one outbound flight, based on nationality data available to us); more than three times our scope 1 and 2 emissions.

Travel emissions alone, however, are not the whole picture; we have to consider the benefits of the education that our community receives, and the positive impacts this can spread once our students graduate.

## **Priority 3: EDUCATION**

**27%** Proportion of new undergraduates who completed sustainability content in the Essex Preparation Programme (EPP)

The Education for Sustainability section of the SSS action plan is now included in the supporting Curriculum Review Moodle course. The Curriculum Review includes a diagnostic tool to identify areas of future focus, workshops, and surgeries, and supporting resources.

Extracurricular opportunities for students to engage with sustainability are evolving, with activities through Chart My Path available, as well as ad-hoc events such as Sustainability Awareness Week (annually in March).

For staff, sustainability information is embedded into the How We Work At Essex training course, and content is reviewed each year to ensure it is up to date.

Timetable efficiencies have been incorporated into the new Academic Calendar considerations, to be mindful of environmental efficiencies – for example grouping classes to reduce the number of days students need to travel to campus and making best use of teaching spaces to optimise heating and lighting. Work to recognise leadership in Education for Sustainability through recognition and reward processes is progressing. Sustainability-related activity will be included as an example in the published guidance.

## **ESSEX PREPARATION PROGRAMME AND ESSEX MASTERS PROGRAMME**

The Essex Preparation Programme (EPP) and the Masters Preparation Programme (MPP) are online courses for students who have received an offer from Essex, to prepare them for their start at the University. The course is divided into six parts and covers key aspects of university life. Sustainability content was first added to the EPP in 2023 and the MPP in 2024, offering an introduction to sustainability at Essex.

Students who complete the content are invited to join a Sustainable Students' Group when they arrive at Essex, to meet like-minded students and be supported in carrying out their own projects, such as Climate Cafés and volunteering activities, as well as receiving bespoke training.

## **Priority 4: RESEARCH**

The Pro-Vice-Chancellor Research (PVCR), Faculty Deans Research (FDRs) and Research and Enterprise Office (REO) are working collaboratively to identify climate, ecology and sustainability calls for research, to supplement the proactive work going on within Schools and Departments, as part of work to develop complementary areas of research.

A Civic Universities launch event in October 2023 showcased our collaboration with Essex County Council, Colchester City Council, Tendring District Council and Suffolk and North-East Essex Integrated Care Board, and the memorandum of understanding which was signed at the event contains a range of commitments to a shared vision for net zero carbon emissions.

We are participating in the Laboratory Efficiency Assessment Framework (LEAF), which recognises sustainable labs and will support some funding applications.

Cross University Research Events (CURE) continue to bring the community together and contribute to the shared understanding on climate and sustainability, presenting opportunities for networking and collaboration. Partnership working continues to evolve; for example the Eastern Arc Conference in September 2023 was themed around Food Security at a Time of Crisis. Held at the University of Kent, several Essex academics attended, with some presenting their work.

## **CONCORDAT FOR THE ENVIRONMENTAL SUSTAINABILITY OF RESEARCH INNOVATION AND PRACTICE**

[The Concordat](#) is a framework for embedding environmental sustainability into all research and innovation practices. Essex contributed to its creation and was one of the first signatories to this voluntary scheme, in early 2024. The ambition is to create meaningful and long-lasting impact to reduce the environmental impacts of carrying out research.

Signatories agree to action six priority areas, including maintaining transparency about the environmental impacts of research output and finding new climate-conscious, low-carbon approaches.

## Priority 5: BIODIVERSITY AND GROUNDS

**5.5%** Increase in habitat areas across the Colchester campus from since 2023

Wivenhoe Park tours, at our Colchester Campus, are delivered on Open Days and during Welcome activities, to encourage students to explore their environment. Baseline data indicates that almost half of students do explore the parkland.

A Green Space Policy has been developed, which sets out how any planned impact on green spaces and the ecology of our campuses are avoided, mitigated and managed.

Actions are ongoing to nurture biodiversity on campus, with more wildflower areas and an increase in 'no mow' areas under trees during summer. There are now eight hedgehog boxes and seven new log piles to create more habitat areas.

Many of the Grounds teams' hand tools have been upgraded to electric/battery-powered machinery, such as lawnmowing and trimming equipment; meanwhile advancements for vehicles, such as All-Terrain Vehicles (ATV), is being monitored.

### **GROWING OUR OWN – ESTABLISHING AN ON-SITE PLANT NURSERY**

The Grounds team has installed a fully equipped 30' x 20' polytunnel for growing plants onsite at our Colchester Campus. The team are growing plants such as geraniums, rhododendrons, dogwood, verbena and hydrangea, as well as trees including oak, beech, walnut and yew.

All are grown from seeds or cuttings taken from plants on campus, and all the compost used comes from green waste collected on campus throughout the year. The plants will replenish flower beds across campus, and trees will be planted in areas where existing trees have died.

## Priority 6: WATER MANAGEMENT

**6%** Reduction in water use between since 2019-20

Water usage currently equates to 13m<sup>3</sup> annually per person, and per m<sup>2</sup> of internal space, we use a 0.69m<sup>3</sup> of water (based on 2024-25). When analysed compared to 2019-20 usage (normalised to pre-covid levels), we used 5% less water in 2023-24, then 1% less than that in 2024-25. Taps have been replaced, or restrictors installed where lower-flow options can be used. It is estimated that this will achieve savings of approximately £15,000 annually from lower water usage and reduced gas use (i.e. not heating as much hot water).

As we are in one of the UK's driest counties, our Grounds team focuses on using plants that can tolerate dry conditions whenever possible, to avoid the need to water them regularly with mains water. Roof/gutter rainwater harvesting for the Grounds team is being planned to ensure reserves are available. Monthly anomaly checks take place to identify any issues or unexpected increases, avoiding wastage.

### **LOWERING THE FLOW – SOUTH COURTS SHOWER HEADS**

In 2023 1,218 ensuite showers in South Courts accommodation were fitted with flow restrictors, which save 11 litres of water per minute per shower when in use. This offers substantial water savings, while maintaining appropriate water pressure for the user.

## **Priority 7: WASTE AND RECYCLING**

**33.4%** Amount of waste separated for recycling on campus in 2024-25

Waste generated across the University declined in 2024-25, compared with 2023-24, bringing us in line with our target to reduce total waste by 5% year on year from 2019 levels.

Increases and decreases in on-campus activity and overall community population size impact waste generation, so we also track our performance on waste and recycling based on overall mass and recycling mass (in kilograms) per head. In 2024-25 waste per head reduced by 5%, while recycling per head remained steady.

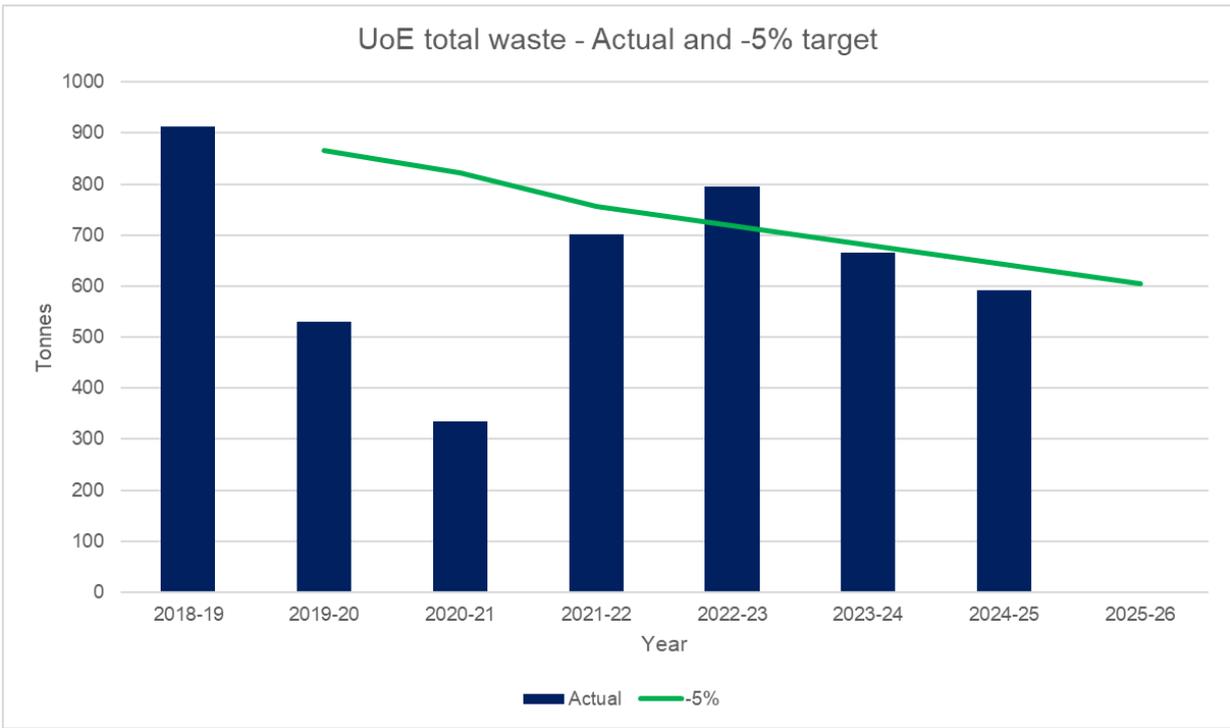


Figure 3. Annual total waste, overlaid with 5% reduction target to 2026

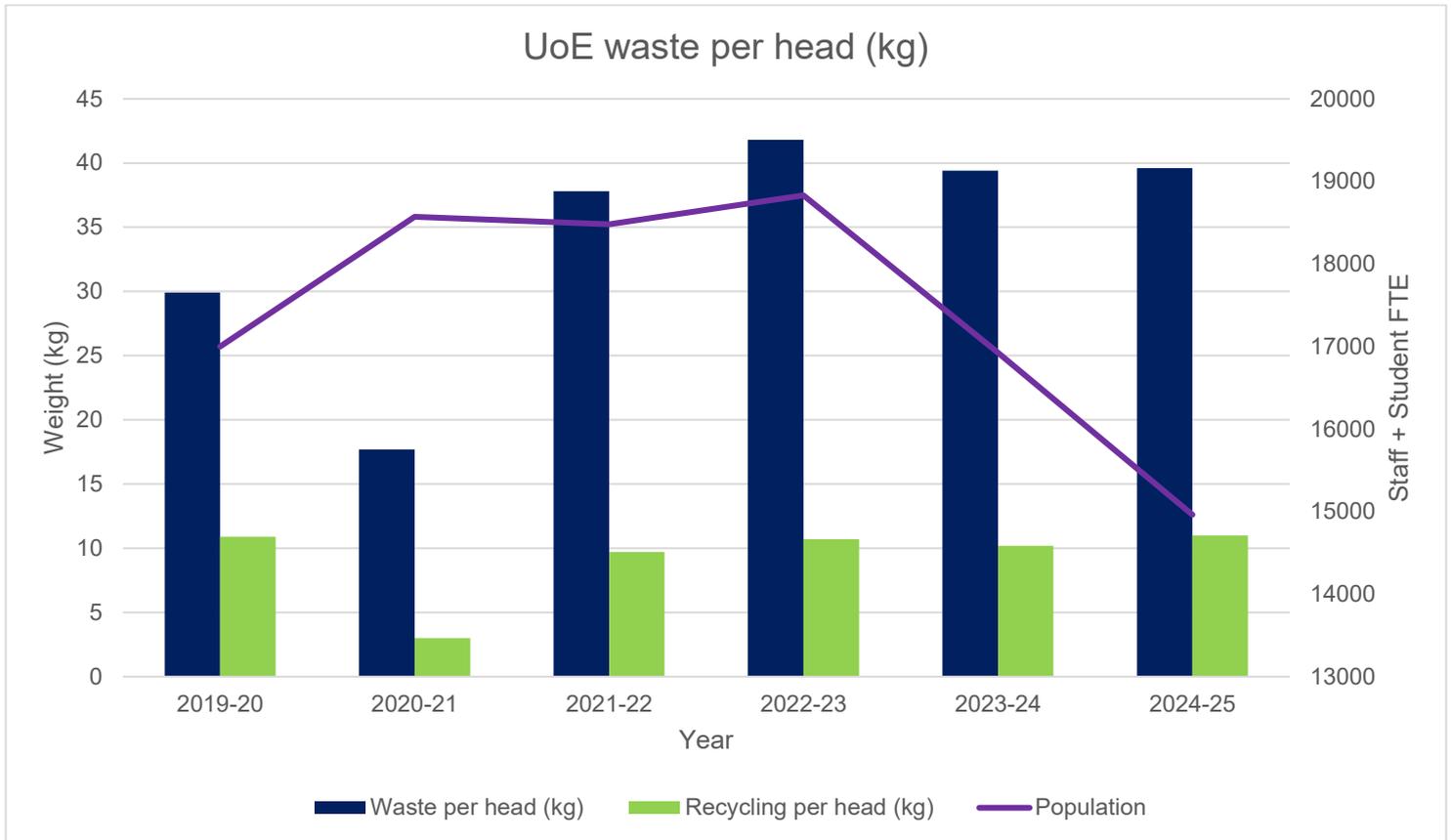


Figure 4. Waste per head (total and recycling).

When all types of recycling and reuse are factored in (with available data to date), the University’s recycling rate for 2024-25 was 33.5%, up from 32.6% in 2023-24, showing that recycling overall remains steady.

**FINDING NEW HOMES FOR FURNITURE ON CAMPUS – REUSE INITIATIVE**

Departments move, room purposes change, and requirements for furniture shift. Consequently, we often find there are items that are no longer needed but have plenty of life left in them. In 2022 we opened a facility to store and rehome furniture across (and between) our campuses, whenever possible. This initiative helps teams to avoid unnecessary spend and embed reuse principles.

Since the furniture reuse facility got up and running, we have saved an estimated eight tonnes in carbon emissions associated with the disposal of items and saved circa £32,000 compared with buying new items (based on conservative price estimates).

## Priority 8: TRAVEL AND TRANSPORT

**211** Number of new cycle racks installed as part of The Pastures planning consent

Our fleet of electric vehicles (EVs) stands at 11, and we use circa 800 kWh of electricity each month to charge them.

A Business Travel Policy, with the aim of encouraging low emissions and/or reduced air travel, is being developed. It can be a challenging topic to address as international travel can be seen as an inherent part of academic/research development and prestige, however many people are open to discussions. Data shows that emissions from business travel have declined since 2019.

Initiatives and incentives to support sustainable and active travel continue, such as bus pass discounts, Dr Bike cycle maintenance and repairs, and promotion of walking routes, as well as availability of hire-per-ride eScooters and eBikes on campus, operated by an external partner in collaboration with Colchester City Council.

### **SUSTAINABLE TRAVEL: INCREASING CYCLE RACK PROVISION**

As part of the development of The Pastures accommodation at the Colchester campus, nine new cycle parks were created, adding a total of 211 new cycle spaces. The new bicycle parking facilities include a canopy cover and lighting.

## Priority 9: FOOD AND DRINK

Essex Food outlets no longer sell plastic bottles of water, instead offering cans, which are infinitely recyclable. Most single use plastics have been eliminated or reduced, and where possible cardboard and paper packaging is used for takeaway products.

All Essex Food menus now include at least 30% vegetarian/plant-based dishes (up from 25% in 2022-23). The team are also exploring how the carbon impacts of dishes can be indicated on menus to inform customer decision-making.

Engagement and focus groups are held to help better understand customer needs, in relation to delivered catering. Training is in place for the delivered catering team to support customers at point of order/booking for suggested quantities to avoid significant leftovers and food waste after events. Many of the food outlets operate on a 'cook to order' basis, which helps to reduce food waste too.

Essex Food outlets optimise energy efficiency of their equipment and have a plan in place for upgrades and replacement of assets. This will be done in a phased way to spread costs.

## **SMART PURCHASING WITH PELICAN**

Essex Food works with Pelican, which helps to make catering procurement more efficient. Orders can be managed in one place, while still working with a variety of quality suppliers, and we set the environmental expectations that we want from them.

The service provides functionality that reduces our impact: for example, consolidating deliveries to just three days per week, which will save an estimated 20 tonnes of carbon emissions annually from trucks not being on the road; estimating the carbon impact of menus so we will be able to display this, helping us to adapt our dishes, and helping customer to make informed meal choices.

## **Priority 10: SUSTAINABLE BUILDINGS**

**30%** Decline in energy consumption per m<sup>2</sup> (gross internal area, GIA) since 2019

Building fabric upgrades to the 1960s buildings at the Colchester Campus are ongoing, with insulation being added to roofs. Windows condition surveys have been carried out to facilitate the prioritisation of upgrades. A review of options to improve the window of the 1960s estate has been completed; any such project would need to be phased over several years to be able to spread the cost; therefore, having a clear set of design standards for consistency will be essential.

Adjustments to Building Management Systems (BMS) have been undertaken and will continue to be implemented when opportunities for efficiencies are identified. The process is managed carefully to find the optimum balance between energy efficiency and thermal comfort. Further sub-metering installations have taken place, providing a greater level of insight into how energy and water are used across buildings. The data allows prioritisation of measures and realises efficiencies.

LED lighting upgrades have been installed across our campuses, that include sensors to control lighting levels and to turn off lighting when no presence is detected. Audits to identify further locations are taking place.

## **WINDOW UPGRADES AT THE JOHN TABOR & CONSTABLE BUILDINGS**

At the John Tabor and Constable buildings, doors and most of the windows have been replaced to improve thermal and energy efficiency.

The work will reduce the University's energy use and carbon emissions and spend on energy, whilst also improving the working and studying environment for occupants.

## Priority 11: SPACE USE

Making best use of our building envelope remains a priority, to avoid adding to our energy use and carbon emissions burden. By reviewing how we use our buildings and being smarter with occupancy, we have the opportunity to implement changes at very little cost, while having the potential to reduce overheads.

Multi-functional/shared space considerations are now part of the space planning process at the space request stage, supporting the smart use of indoor space for greater energy efficiency and further reducing the need for new constructions.

### MANAGING SPACE USE FOR OPTIMUM EFFICIENCY

We regularly review how and when our spaces and buildings are used, which changes over time with fluctuations in community size and changing working and study practices. The findings and subsequent actions will improve how we use space, how spaces are maintained and how we heat, cool, light and ventilate them.

Since hybrid working has been introduced, many offices are no longer fully occupied, creating opportunities to reconsider how they can be best used; for example as agile / hot desking rooms. We are committed to managing our space use within the existing building envelope, through space management and refurbishments, rather than building new.

## Priority 12: FINANCE AND PROCUREMENT

**0%** We have no investments in fossil fuel companies – and we never have.

An estimate of carbon impact per new post was incorporated into the 2024-25 planning round, to serve as an indicator, and this will continue to be refined. Further work will be required before carbon emissions could be given strategic priority in the same way as other themes (i.e. budgets).

Where appropriate the reuse, recycling and/or disposal of physical items (e.g. furniture) are considered at the procurement stage to avoid challenges at end of life.

Sustainability is embedded into the Strategic Planning Advisory Group (SPAG) agenda, and support is given where projects require some strategic oversight, to help move them forward.

## **SUSTAINABLE PROCUREMENT = SMARTER PROCUREMENT**

Incorporating sustainable thinking into the University's latest furniture tender framework was an essential part of the process. Alongside furniture reuse (as above), we continue to improve our approach to purchasing new items by factoring in their design, materials, durability and recyclability.

The furniture framework allows us to select a supplier on a project-by-project basis, tailoring requirements. Working collaboratively, colleagues from Procurement, Estates, Sustainability, Workplace Health, Safety & Wellbeing shared their expertise to ensure the framework covers our needs appropriately.

## **Priority 13: OUR COMMUNITY**

**32** Number of teams who participated in the Sustainable Essex Awards 2024-25.

In 2024-25, 32 teams took part in the Sustainable Essex Awards. For 2024-25 the awards had a refresh, aiming to bring teams closer to the Sustainability Sub-Strategy and its priority areas. The Bronze, Silver and Gold award levels continue, and we have added a Platinum level, which fosters collaboration between teams of staff and/or students.

The Sustainable Students Group was active and well-attended in 2024-25, largely operating self-sufficiently, but with some support from the Sustainability Engagement Team. The group registered as a Society with the Students' Union, cementing their commitment to develop their own agenda. The group consists of students who are keen to learn more and support action amongst their peers.

Their input provides a means of ongoing consultation, helping to ensure that student voices influence change and shape opportunities on ways that meet their needs and requirements.

## **SUSTAINABLE ESSEX AWARDS HIGHLIGHTS 2024-25**

Thirteen Accommodation housekeeping teams completed awards, covering Bronze to Gold levels. Achieving a Gold award, Library and Cultural Services team developed a range of engagement activities to promote waste management and recycling, using their resources to create displays and awareness events.

The Sustainable Students Society focused on education and awareness amongst their peers by organising a sustainable fashion show, working alongside the Clothes Exchange and the SU VTeam, earning a Silver award. The Edge Hotel School staff and students collaborated to earn a Platinum award, organising events and activities on the theme of food waste, alongside external stakeholders including the Essex Climate Commission, Colchester Foodbank and Michelin star chef Rowan Halsted.